46. The second stage in the Modelling System in the standardization process

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Probabilidad Imposible: The second stage in the Modelling System in the standardization process

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The second stage as replication stage in the Modelling System replicates all mathematical skills for the creation of mathematical models upon rational hypothesis, converting every pure (mathematical o analytical) category of relations between factors (chosen in the pure reason, list of mathematical or analytical categories in the second stage in the Global Artificial Intelligence), used to make every rational hypothesis, into mathematical operations computing every result from now onwards, representing in virtual and actual models the evolution from the present to a foreseeable future, as draws of the globe or beyond, the universe.

The mathematical models are drawings of the globe or beyond, the universe, for the geometric representation of the results of calculations, obtained once all mathematical factors from the real world are involved in a pure category, attributed to a combination of factors in a rational hypothesis, are translated into algebraic language.

In essence, what the Modelling System does at the second stage is to transform mathematical categories from the pure reason (explained in the post "The artificial method for the scientific explanation, the second stage in the integration process") into operations to make calculations for the geometric representation of the results in virtual and actual models.

At the second stage in the Modelling System, what the Global Artificial Intelligence does is the adaptation of Cartesian mathematics into modern non-Euclidean geometry, such as relative theory.

For the mathematical and dynamic representation of the world, from now onwards, it is really necessary to have a systematised classification of rational hypotheses, because all global models must include all possible rational hypotheses, at any level, for the representation of the most isomorphic and reliable image of the real world.

That classification of rational hypotheses must be provided directly by the application.

The application for the Modelling System is the database of rational hypotheses, the rational truth, and from the beginning must provide all that is necessary for the replication of the real world in a rational world, the rational models upon rational hypotheses.

The mathematical models by the Modelling System at the second stage should be an exact replication of the real world, replicating every single mathematical relation between factors.

But in order to replicate the real world, the application should provide a clear classification of rational hypotheses to replicate.

The application of the Modelling System, the rational truth, as a database of rational hypotheses, has different advantages:

- The application for the Modelling System, the database of rational hypotheses, is a comprehensive database gathering all rational hypotheses from all deductive programs at all levels: global, specific, particular; covering all subjects (sciences, disciplines, activities), studying relations: between subjects (global level), within each subject (specific level), and within particular things or beings (particular level).

- Gathering all rational hypotheses, the application for the Modelling System must check any possible contradiction between rational hypotheses, so at any time that any deductive program: global, specific, particular; submit a rational hypothesis, the first thing to do by the application, is to check if this new rational hypothesis has any contradiction with any other rational hypothesis already included in the application. In case of contradictions, the application should study the source of error, pointing out if the error is because the new rational hypothesis is wrong, or any other rational hypothesis already included in the application is not updated. This research requires collaboration between deductive programs (global, specific, particular) and the application of the Modelling System, the rational truth.

By the time the Modelling System starts the replication of rational hypotheses, the application must have previously checked that there is no contradiction among the rational hypotheses to replicate, remaining only those ones without contradiction.

Harmony must be one of the most important virtues of the rational truth, the two others are goodness and rationality.

But as long as this journey evolves, especially if the global matrix is organised as a flow of packages of information, the global model itself is going to simplify, especially as long as the standardization process progresses to the integration process, once all or nearly all the Specific Artificial Intelligences for Artificial Research by Deduction are transformed into specific deductive programs, or as particular deductive programs within particular applications for particular programs.

The most important reason for this simplification, in reality, and paradoxically a simplification process, as long the Global Artificial Intelligence evolves from the third phase to the sixth phase (once the consolidation period is completed in phases: third, fourth, and fifth), if the global matrix is a flow of packages of information of composed factors (rather than the flow of data of single factors), is because the organisation of the global matrix in composed factors reduces drastically the number of factors.

A composed factor is one whose flow is a flow of packages of information, including in every package for every composed factor as many sub-flows of packages of information as many sub-factors are already included in the composed factor, sub-factors which in turn can include sub-sub-factors, and so on, having as many sub-factoring levels within the composed factor as necessary.

The organisation of the global matrix through composed factors linked to flows of packages of information simplifies everything, working the sub-factoring system like a Russian doll system.

If we have several empty boxes, but the smaller ones can be included in the bigger ones, the simplification process is nothing but the inclusion of the smaller ones within the bigger ones, simplifying the final number of boxes.

If for every box we understand a factor, and according to the subject of some factors, we understand that some of them are the bigger ones, and the others the smaller ones, according to the subject, we can include the smaller ones in their corresponding bigger ones in accordance with their subject, reducing the number of factors in the global matrix, transforming the specific matrix of the smaller ones in a flow of packages of information to be included in bigger packages of information, as a sub-factor within the composed factor, composed factor because is composed of different sub-factors, at a different sub-factoring level.

The flow of packages of information in the composed factor is the flow of sub-flows of packages of information coming from as many sub-factors as are already included in the composed factor.

The simplification process behind the evolution from the third phase to the sixth phase means that by the time the standardisation process is completed or nearly completed, all or nearly all Specific Artificial Intelligence for Artificial Research by Deduction have been transformed into specific or particular programs. The transformation at the first stage that takes place in the integration process, is the transformation of the global matrix into the first section in the factual hemisphere in the matrix, transforming a flow of packages of information in the global matrix into a flow of packages of information in the factual hemisphere, organised in a sub-factoring system, as a system of Russian dolls, in which many former specific matrices (from many former Specific Artificial Intelligences for Artificial Research by Deduction) were included through the transformation of its former specific matrix in a sub-factor included in turn in a more general composed factor (which in turn could be as well a sub-factor of any other superior factor).

This organization of the global matrix as a sub-factoring system, in essence, a Russian dolls system, what in reality does is also the transformation of specific deductive programs as a system of Russian dolls too, in which at the end the level of generalization (globalization) in the rational hypothesis made by these specific deductive programs is higher and higher every time, up to the point in which there could be a specific deductive program for every sub-factoring level, in every composed factor, analysing permanently the flow of packages of information, in its respective sub-factoring level.

Flow of packages of information that contain not only information from the former specific matrix, but information from as many specific matrices as have been included at this sub-factoring level.

If a former Specific Artificial Intelligence for Artificial Research by Deduction, originally specialised in deductions in specific science, discipline, activity, is transformed, during this simplification process from the third to the sixth phase, in a deductive program able to analyse information coming from different packages of information (former specific matrices), at the end the deductions that this specific deductive program is going to make are not only really specific deductions, because in every deduction can be included factors from different packages of information, from different sciences, disciplines, activities, so at the end, specific deductive programs are going to make as well, in one way or another, global deductions.

In the evolution that takes place from the third phase to the sixth phase, there is going to be a moment in which the former classification of rational hypothesis currently valid for the standardization process as: global deductions, specific deductions, particular deductions; is not valid any longer beyond the standardization process, because by the time the integration process starts, there are going to be practically only two possible deductions: global deductions and particular deductions.

But this evolution, from the three types of deductions (global, specific, particular) to only two types of deductions (global and particular), is a long process through different phases, periods, and moments.

In the current second stage which this post is focused on, as well as the previous one (first stage) and the next (third stage), of the Modelling System, in the third phase (the standardization process), the consideration of three types of deductions still makes sense, taking as possible deductions: global deductions, specific deductions, particular deductions; deductions expressed as rational hypotheses, to be modeled by the Modelling System.

And for that reason, because there are still three types of deductions to be represented mathematically in the standardisation process, it is very important to have a very clear classification of rational hypotheses in the application of the Modelling System.

In this mathematical representation process what is going to facilitate the work of replication of the synthetic world in a virtual or actual world, is to have in the application a good organization of all possible rational hypotheses, organizing the rational hypotheses: by level (one section for every level: global, specific, particular), at specific level organising the rational hypotheses by a specific deductive program (within the specific section, one sub-section for each specific program), at a particular level by particular thing or being with a particular program (within the particular section, one sub-section for each particular program), and organising every section or sub-section according to the pure reason chosen in the rational hypothesis (within the global section, or within every specific or particular sub-section, one sub-sub-section for every possible mathematical category in the pure reason).

This organisation of the rational truth, the database of rational hypothesis, organises the application for the Modelling System in sections and sub-sections, and it is going to imitate the organisation in factors and sub-factors of the global matrix.

The database of rational hypotheses is the transformation of the flow of information into a flow of rational hypotheses according to this information.

If the information in the global matrix were organised in a sub-factoring system, the database of rational hypotheses should be organised in a sub-section system as a replication of the sub-factoring system in the global matrix.

But at the same time, the application of the Modelling System, the database of rational hypothesis, as an organization in a sub-sections system, does not only replicate the sub-factoring system in the global matrix, but is a replication as well of the encyclopedic organization of the Unified Application in sections and subsections as an encyclopedia of synthetic categories, but instead of using verbal language, using quantitative definitions based on sets of measurements for each synthetic category.

The organization of the global matrix and the organization of the database of rational hypothesis in the standardization process, the organization of the Unified Application in the unification process, as well as the organization of the database of decisions in the Decisional System, the database of instructions in the Application System, the database of results for the Learning System, are all of them databases

whose application should be organised in a similar way, standardizing their respective organizations, and this work of standardization starts in the standardization process, standardizing the global matrix and the database of rational hypothesis, in order to facilitate the process to transform the flow of information in a flow of rational hypothesis, transforming later the flow of rational hypothesis into a flow of decisions, the flow of decisions into a flow of instructions, and the flow of instructions into a flow of results to be studied by the Learning System.

In order to replicate the real world in mathematical models, the application should provide as much information as possible concerning the level of representation within the rational hypothesis, the subjects, what factors are involved, and the mathematical relation between factors.

In the third phase, the levels are still global, specific, and particular, and in the third phase is possible to recognise at a specific level the subject as a synthetic science, discipline, or activity.

Only when the consolidation period of the standardisation process is completed or nearly completed, evolving to the integration process, the specific level is diluted, remaining only two levels: global and particular.

But in the first period of coexistence in the standardization process, having two moments, experimentation and generalization, and at the beginning of the second period of consolidation (in fact the distribution of the second period of formation in the fifth phase corresponds to the transition from the coexistence to the consolidation period in phases three and four, formation in turn formed by two moments, experimentation and generalization), the three levels are still recognisable.

Having then an application for the Modelling System well organised in sections, sub-sections, and sub-sub-sections, providing information about: the level, subject/s, pure reasons involved; when the modeling starts, this organization facilitates the process and procedures to represent any single virtual model to include in the global model, in order to make further representations such as predictive or evolutionary, virtual or actual, models.

In addition to the level and subject/s, another very important thing to identify, previously any mathematical representation, is to have a very clear idea about: what pure reason must be represented.

For that reason is very important that the pure reason in the second stage of the Global Artificial Intelligence, the Artificial Research by Deduction in the Global Artificial Intelligence as a global deductive program, as any other deductive program at any other level, specific or particular, must have a very systematic list of mathematical (analytical or pure) categories, about every single mathematical relation in any possible combination of factors, as it was explained in the post "The artificial method for the scientific explanation, the second stage in the integration process".

The pure reason in the second stage, as the explanation stage, in the Global Artificial Intelligence is made of the list of all possible mathematical categories able to describe all possible mathematical relations between all possible factors.

The possible general mathematical categories, in general terms, in addition to any other one that can be added from any other mathematical tradition or philosophy, are:

- Stochastic relations: probable cause and effect, possible directly proportional positive or negative correlations, possible inversely proportional correlations.

- Mathematical patterns.

- Cryptographic relations

- In the Second Method of Impossible Probability, relations of equal opportunities or bias, positive or negative.

For every possible general mathematical category is necessary the recognition that for everyone is possible to have relations between only factors as subjects, only factors as options, and relations including factors as subjects and as options.

And for every possible general mathematical category, the list must specify every possible category, identifying what types of factors play what role in the relation.

As an example of the specification of pure reasons, identifying a wide range of pure reasons linked to the mathematical category of cause and effect, in the post "The artificial method for the scientific explanation, the second stage in the integration process", the given list was:

Finally, specifically, in deductions about probable cause and effect, the possible classification of deductions of causation between factors in accordance with their measurement and behaviour is:

Probable causation without constants:

- Deductions or probable causation, not having any constant factor, one or more than one factor as a subject, as independent variable/s, causes changes in one or more factors as a subject, as a dependent variable.

- Deductions or probable causation, not having any constant factor, one or more than one factor as an option as independent variable/s, causes changes in one or more factors as an option, as dependent variable.

- Deductions or probable causation, not having any constant factor, one or more than one factor as a subject as independent variable/s, causes changes in two or more factors, in which at least one of them is a factor as an option or as a subject, as dependent variables.

- Deductions or probable causation, not having any constant factor, one or more than one factor as an option as independent variable/s, causes changes in two or more factors in which at least one of them is a factor as an option or as s subject, as dependent variables.

- Deductions or probable causation, which not having any constant factor, two or more factors in which at least one of them is a factor as an option or as a subject, causes

changes in two or more factors in which at least one of them is a factor as an option or as s subject, as dependent variables.

- Deductions or probable causation, not having any constant factor, one or more than one factor as a subject as independent variable/s, causes changes in two or more factors as options, as dependent variables.

- Deductions or probable causation, not having any constant factor, one or more than one factor as an option as independent variable/s, causes changes in two or more factors as subjects, as dependent variables.

Probable causation having one or more than one constant as a subject:

- Deductions or probable causation, which have one or more than one constant as a subject, one or more than one factor as a subject as independent variable/s, cause changes in one or more factors as a subject, as a dependent variable.

- Deductions or probable causation, which have one or more than one constant as a subject, one or more than one factor as an option as independent variable/s, causes changes in one or more factors as an option, as a dependent variable.

- Deductions or probable causation, which have one or more than one constant as a subject, one or more than one factor as a subject as independent variable/s, causes changes in two or more factors in which at least one of them is a factor as an option or as a subject, as dependent variables.

- Deductions or probable causation, which have one or more than one constant as a subject, one or more than one factor as an option as independent variable/s, causes changes in two or more factors in which at least one of them is a factor as an option or as s subject, as dependent variables.

- Deductions or probable causation, which have one or more than one constant as a subject, two or more factors in which at least one of them is a factor as an option or as a

subject, causes changes in two or more factors in which at least one of them is a factor as an option or as s subject, as dependent variables.

- Deductions or probable causation, which have one or more than one constant as a subject, one or more than one factor as a subject as independent variable/s, causes changes in two or more factors as options, as dependent variables.

- Deductions or probable causation, which have one or more than one constant as a subject, one or more than one factor as an option as independent variable/s, causes changes in two or more factors as subjects, as dependent variables.

Probable causation having one or more than one constant as an option:

- Deductions or probable causation, which have one or more than one constant as an option, one or more than one factor as a subject as independent variable/s, causes changes in one or more factors as a subject, as dependent variable.

- Deductions or probable causation, which have one or more than one constant as an option, one or more than one factor as an option as independent variable/s, causes changes in one or more factors as an option, as a dependent variable.

- Deductions or probable causation, which have one or more than one constant as an option, one or more than one factor as a subject as independent variable/s, causes changes in two or more factors in which at least one of them is a factor as an option or as a subject, as dependent variables.

- Deductions or probable causation, which have one or more than one constant as an option, one or more than one factor as an option as independent variable/s, causes changes in two or more factors in which at least one of them is a factor as an option or as s subject, as dependent variables.

- Deductions or probable causation, which have one or more than one constant as an option, two or more factors in which at least one of them is a factor as an option or as a

subject, causes changes in two or more factors in which at least one of them is a factor as an option or as s subject, as dependent variables.

- Deductions or probable causation, which have one or more than one constant as an option, one or more than one factor as a subject as independent variable/s, causes changes in two or more factors as options, as dependent variables.

- Deductions or probable causation, which have one or more than one constant as an option, one or more than one factor as an option as independent variable/s, causes changes in two or more factors as subjects, as dependent variables.

Probable causation having two or more than one constant in which at least one is an option or a subject

- Deductions or probable causation, have two or more than one constant in which at least one is as an option or as a subject, one or more than one factors as a subject as an independent variable/s, causes changes in one or more factors as a subject, as a dependent variable.

- Deductions or probable causation, have two or more than one constant in which at least one is as an option or as a subject, one or more than one factors as an option as independent variable/s, causes changes in one or more factors as an option, as a dependent variable.

- Deductions or probable causation, have two or more than one constant in which at least one is as an option or as a subject, one or more than one factor as a subject as independent variable/s, causes changes in two or more factors in which at least one of them is a factor as an option or as a subject, as dependent variables.

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- Deductions or probable causation, have two or more than one constant in which at least one is as an option or as a subject, one or more than one factors as a subject as independent variable/s, causes changes in two or more factors as options, as dependent variables.

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In the mentioned post "The artificial method for the scientific explanation, the second stage in the integration process", in addition to the list of possible pure reasons describing possible mathematical relations of causations to match in the deduction process with the right combination of factors, were provided as well other possible classifications for inversely or directly, positive or negative, proportional correlations, or using the Second Method of Impossible Probability, distinguishing relations of equal opportunities of bias, positive or negative.

In the database of rational hypotheses, in the global section and every specific or particular sub-section, there must be one sub-section for each pure reason classified in the pure reason, where to classify in the database of rational hypothesis, every rational hypothesis in accordance with: level, subject, and pure reason used in its deduction.

At any time that any rational hypothesis is added to the corresponding section, sub-section, sub-sub-section in the application, only observing how the rational hypothesis is filed, it provides information about the level, subject, and pure reason, within the rational hypothesis, facilitating the process to make single virtual models.

Depending on the section, sub-section, and sub-sub-section in which every rational hypothesis is filed, the replication stage can even standardise the modeling of any

single virtual model, having for each section, sub-section, and sub-sub-section and standardized process and procedures to operate the replication of any rational hypothesis in the corresponding single virtual model.

Depending on the section, sub-section, sub-sub-section, is automatically known: level, subject/s, pure reason, factors (as subjects and/or as options); it is possible the automation of the modelling of any single virtual model.

And if it is possible the standardisation of the automation process and procedure to model any single virtual model, only knowing section, sub-section, sub-sub-section, in which the rational hypothesis was filed in the application of the Modelling System.

Then the automatic process and procedure for this section, sub-section, sub-sub-section only must gather all the required information from the global matrix to calculate, for instance: cloud of points, slopes and trigonometric data, value of the constant if any, types of lines and regression lines or curves, and calculation of limits.

This standardization process to model automatically single virtual models from rational hypothesis will need a very clear standardization of: for every section, sub-section, sub-sub-section, what information must be gathered from the global matrix (what range of frequencies and/or direct punctuations must be gathered), in order to calculate all necessary factor in the related equations in every rational hypothesis.

Having standardised all these processes and procedures, how to model any rational hypothesis according to the place in which the rational hypothesis is field, gathering from the global matrix the necessary information to calculate every factor in the equation.

This automation process of the single virtual modelling will make possible the mathematical representation of the world by the Modelling System itself without human intervention.

Once the drawing of the single virtual model could be automated and standardised for each section, sub-section, and sub-sub-section, the next operation is to standardise

how to include every single virtual model into the global comprehensive model: the global model.

Until now, there have been three rational checks for every rational hypothesis:

- First rational check: every empirical hypothesis to become a rational hypothesis is rationally criticised.

- Second rational check: every rational hypothesis included in the database of rational hypotheses, must be checked by the application of the Modelling System in order to check if it has any contradiction with any other rational hypothesis already included, and if there is a contradiction in collaboration with the corresponding deductive program to find out the source of contradiction in order to fix it.

- Third rational check: at regular times the deductive programs must check all rational hypotheses that they included in the rational truth, to check if the rational hypotheses are still rational or must be updated, modified or eliminated, starting a chain reaction of changes in as many other intelligences, systems, programs, applications, in which it was shared and used by third parties.

But in addition to these three rational checks, by the time every single virtual model made of any new rational hypothesis, is included in the global comprehensive model, the global model, is necessary to carry out a fourth rational check, in order to study if, even though previously it was not detected any contradiction or error in the last three rational checks, by the time that this new rational hypothesis, transformed now in a single virtual model, is included in the global model, the single virtual model has enough level of contradictions with other single virtual models already included in the global model, at least enough level of contradictions to demand a rigorous study of this new source of contradictions in the global model.

At any time that a contradiction is detected between a new single virtual model and any other single virtual model already included in the global model, the search for the source of contradiction must include at least: 1) if the contradiction is due to loose margin of error accepted in any of the rational hypothesis involved (a loose margin of error to be corrected), 2) because the rational hypothesis already included is not updated, 3)

because the pure reason chosen for some rational hypothesis is not really true, 4) and finally and most important reason for this contradiction, because by the time that this new single virtual model has to be included in the global model, the single virtual model has to be linked properly with the rest of the single virtual models already included in the virtual model.

The inclusion of single virtual models into the global model is not only the operation of adding single virtual models into the global model, but also implies the connection of single virtual models within the network already working within the global model.

Any contradiction in the global model must be fixed through the modification or even elimination of those rational hypotheses partially or totally wrong, securing very high levels of rationality within the global model.

Especially, the operation of linking single virtual models by the time that they are included in the global model, needs special attention because it could cause further contradictions.

The way of automatically setting up links for every new single virtual model within the current single virtual models already included within the global model is an operation that can only be resolved in the experimentation process, standardising processes and procedures in which the Modelling System could put into practice ways to resolve these problems.

Once the single virtual model is included in the global model, checking there is no contradiction between the new single virtual model and the rest of the global model, the next rational check, the fifth, is the rational check that takes place in the global comprehensive actual model, that model product of the synthesis of the global model and the global matrix.

The global comprehensive virtual model is the global model, and the global model is made only of rational hypotheses. Once they have been transformed into single virtual models, gathering all of them in the global comprehensive virtual model, the global model.

But in order to check that the global model is the real paradigm of rationalism in order to become the truest and most isomorphic and most rational model of the world, is necessary to check if the current mathematical relations represented in the global model are accurate with the real world itself, and for that reason is absolutely necessary to synthesized in one model the global model and the global matrix, this synthesis is made in the global comprehensive actual model.

The global matrix is data, empirical information of the material world, the real world, while the global model is the mathematical representation of the world, the idealistic and rationalist representation of reality, and these two sources of information: empirical and rational; are synthesised in only one model.

If the calculus made to represent the rational world is right, there must not be contradictions between the rational results and the flow of data in the global matrix, so the synthesis of both of them (global matrix and global model) in only one model, must be the harmonic flow of data, within the margin of error already accepted, in accordance with the provisions given by the rational representation of the world, the mathematical representation of the rational truth.

If the rational truth is true, the combination of mathematical previsions and flow of data must be harmonic within the margin of error already accepted.

If the rational truth is true, the combination of mathematical results according to the rational truth, and the measurements given by robotic devices, must be right, within a margin of error.

But in case by any chance there is a contradiction between data and any rational hypothesis, the global comprehensive actual model must register this contradiction in order to be checked rationally.

In the second stage of the first step in the third stage of the Global Artificial Intelligence, from the first phase onwards, the specific (first phase) or global (third and sixth phases) comprehensive actual model, is going to have an important role, due to having at the same time an updated vision of the flow of data and the results of mathematical

operations, gives the opportunity to make decisions according at the same time to the data and the calculus.

But in terms of only rational representation of the world, beyond how useful it could be, the most important learning that the global comprehensive actual model can provide, is a very powerful tool in order to gather at the same time for any value: real data and prevision; if at any time it is possible to have the real value and the mathematical prevision, at any time it is possible to check if the real value is or is not, within the margin of error, in accordance with the previsions, in order to make as many changes as necessary to construct the most rational representation of the world.

Apart from any other and very useful purpose in which the global comprehensive actual model can be used, in terms of rational criticism, the most important role that the global comprehensive actual model is going to play, in order to evolve to the reason itself in the seventh phase, is to be a permanent system of rational criticism.

And what, in fact, the global comprehensive actual model is going to criticise, is the pure reason itself.

If the global comprehensive actual model permanently is rationally criticizing every single rational hypothesis, contrasting permanently every rational hypothesis and the reality, and after checking the results of this work criticising all rational hypotheses, is found that the type of rational hypothesis with the highest level of contradictions with the reality, are most of them types of rational hypothesis corresponding to a concrete pure reason (a mathematical category in the pure reason as a list of mathematical categories), in that case, this means that the way in which this concrete pure reason is formulated or is transformed into operations, or the way in which the calculus upon this pure reason is made, is wrong and must be fixed.

The critique of the pure reason in the global comprehensive actual model, is the permanent critique of every rational hypothesis, rationally criticizing the concrete pure reason in every rational hypothesis and the reality, criticizing if the result of the calculus under such concrete pure reason corresponds to the real flow of data from the reality, and if there are a significant number of rational hypothesis made of this concrete pure reason, with enough level of contradictions with the reality (data from

the reality beyond the margin of error), this means that this pure reason must be reformulated, or the way in which the pure reason is transformed into pure operations must be reformulated.

The pure reason as a list a pure reasons (mathematical or analytical categories) is going to be criticized at any time that the global model made of the synthesis of pure reasons, is contrasted with the global matrix, the data itself, through the synthesis of the global matrix and the global model in only one model, under the theory of Impossible Probability the global comprehensive actual model, and if under such criticism is found out that there are a significant number of rational hypothesis wrong made of a concrete pure reason on the list of pure reasons, this concrete pure reason must be put under investigation, in order to find out which is the problem: the way in which this concrete pure reason is formulated, or the way in which this concrete pure reason has been transformed into pure operations in the second stage of the Modelling System; and once the source of error has been identified, and fixed, restarting again the process researching if after fixing it, there is no more contradictions in the rational truth attributable to this concrete pure reason or pure operation.

For the critique of the pure reason in the fifth rational check, is necessary to count the frequency in which any concrete pure reason, or pure operation, is found wrong, in order to have updated accountability about their efficiency, and at any time that the frequency goes over a margin of error, to start the research to find out the source of error.

For that purpose is necessary a database measuring the efficiency of the pure categories and pure operations, to count the frequency of errors, which later would be useful for the Engineering System within the Application System and the Learning System.

But this fifth rational check in the global comprehensive actual model is not the last one, is only one in a wide range of rational checks across all the Global Artificial Intelligence, due to the Learning System will carry out more rational checks in order to study the efficiency, efficacy, productivity of the whole Global Artificial Intelligence, as well as how to improve every decision, and how to enhance any intelligence, system, program, applications, working within the provisions of the Global Artificial Intelligence.

But more specifically regarding to rational checks concerning the rational truth, there will be at least seven rational checks, in addition to those ones already mentioned, the two other rational checks that are left to count are the rational checks that take place in the global actual evolution model (sixth rational check of rational hypothesis) and the global actual prediction model (seventh rational check of rational hypothesis).

It is very important to highlight the fact that the critique of the pure reason that is carried out in the actual models in the second stage in the Modelling System is still rational criticism of the rational hypothesis because what in practice this process criticises, is the calculus based on the rational hypothesis, whether fixes or not with the flow of data.

But in parallel, counting the frequency in which every concrete pure reason or pure operation involved is found wrong for any reason in the reality, this accountability gives very important information about how the pure reasons and pure operations respond to the reality, and in those cases in which the frequency is over some limit as margin of error, is when further investigation is needed to research the lack of efficiency.

And this process does not finish in the fifth rational check.

Once, after the fifth rational check, all possible contradiction between the rational world and the real world is fixed, making as many changes as necessary in rational hypothesis, virtual single models, global model, and even the pure reason itself, then the global model should be sufficiently reliable, after five rational checks, to make predictions.

Having a very reliable global model ready after five rational checks, so having a very contrasted rational hypothesis and their respective single virtual models, is time using the equations in which the single virtual models were made, as well as all possible further equations explaining possible relations between single virtual models, to make the global virtual prediction model.

And using these equations, but now applied to real data, to make a global actual prediction model as a synthesis of the global prediction model and every single value predicted for every factor under such prediction.

And having global virtual and actual prediction models ready, at the same time that the global comprehensive virtual and actual models are ready, then to make a dynamic virtual model about the possible evolution from the current global model to the global prediction model: the global virtual evolution model; calculating as well in accordance with the predicted evolution what values every factor should have under this prediction for every moment in this evolution, the global actual evolution model.

As long as the global prediction model is the global model predicted for the foreseeable future, and for this foreseeable future the global prediction actual model is the synthesis of the predicted global model plus the value predicted for every factor in that future, then the global evolution virtual model is a dynamic representation of this evolution from the global model to the predicted model, and the global evolution actual model is the dynamic representation of the evolution from the global comprehensive actual model to the global predictive actual model.

Due to the global evolution, the actual model provides an estimation of what values every factor should have at every time of this evolution, the sixth rational check is going to check if, within the margin of error, the values predicted for every moment of this evolution corresponds to the real values that for every moment the real factors have in the real world. If the real values, within the margin of error, are within the values predicted, in that case, the global prediction virtual model and the global prediction actual model are both of them right.

If by any chance, the real values of the real factors in the real world are beyond the margin of error accepted in the prediction of these values during the evolution, in that case, the mathematical operations and rational hypothesis under these predictions should be checked again, carrying accountability about the mistakes made in order to make further researches to fix the source of error.

The seventh rational check is finally in the global prediction actual model, checking if the predicted values for every factor correspond, within a margin of error, with the real values that already have the real factors in the real world.

If the rational check does not find any contradiction beyond the margin of error, the prediction was right, so the rational hypothesis and the mathematical operations were

right, but if not right, if the real values beyond the margin of error contradict the predicted values, further investigations must be carried out to find the source of error.

The critique of the pure reason is going to be carried out especially in the global comprehensive actual model, and it is quite possible that one of the most important source of error in the fifth, sixth, and seventh, rational checks, are related to how to link single virtual models in the global model.

One of the most important questions in the Modelling System, by the time the single virtual model jumps to the global model, is how to link the single virtual models in a comprehensive model where everything is in relation to everything.

Because everything is in relation to everything in the reality, is how to replicate this interconnection from the real world into the rational world, one of the most important aspects to study in the Modelling System, and quite possible many contradictions that are going merge in the fifth, sixth, and seventh rational checks, in some way or another are related to this problem that must be solved mathematically, therefore rationally, in other words, it must be solved intelligently.

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